

AMENDED

## CLAIMS

1. (cancelled)

5           2. (Amended) A regenerator disposed on a flow passage for a working gas, formed by stacking a film-shaped resin member (8) in a direction crossing a flow direction of the working gas,

      said resin member (8) including a projection (10) formed by subjecting a surface of said resin member to plastic deformation and having an opening (10b1) on its tip, and  
10          said projection (10) providing a gap (9) between layers of said stacked resin member (8).

3. (cancelled)

15          4. (cancelled)

5. (amended) A regenerator disposed on a flow passage for a working gas, formed by stacking a film-shaped resin member (8) in a direction crossing a flow direction of the working gas,

20          said resin member (8) including a projection (10) formed by subjecting a surface of said resin member to plastic deformation, and  
            on the surface of said resin member (8), the projection (10) in a prescribed

region being adjusted to have a height different from a height of the projection (10) in another region.

6. (cancelled)

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7. (cancelled)

8. A regenerator disposed on a flow passage for a working gas flowing between a compression space (28) and an expansion space (29) of a Stirling refrigerator, formed by stacking a film-shaped resin member (8) in a direction crossing a flow direction of said working gas,

said resin member (8) having a plurality of projections (10) on its surface,

said plurality of projections (10) providing a gap (9) between layers of said stacked resin member (8), and

15 on the surface of said resin member (8), the number of the projections (10) per unit area being increased as the distance from said expansion space (29) decreases, compared to the side of said compression space (28).

9. (amended) A Stirling refrigerator, provided with a regenerator that is disposed on a flow passage for a working gas and is formed by stacking a film-shaped resin member (8) in a direction crossing a flow direction of the working gas,

said resin member (8) including a projection (10) formed by subjecting a surface of said resin member to plastic deformation and having an opening (10b1) on its tip, and said projection (10) providing a gap (9) between layers of said stacked resin

25 member (8).

10. A Stirling refrigerator, provided with a regenerator that is disposed on a flow passage for a working gas flowing between a compression space (28) and an

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expansion space (29) and is formed by stacking a film-shaped resin member (8) in a direction crossing a flow direction of said working gas,

    said resin member (8) having a plurality of projections (10) on its surface,

    said plurality of projections (10) providing a gap (9) between layers of said stacked resin member (8), and

5           on the surface of said resin member (8), the projection (10) in a prescribed region being adjusted to have a height that is different from a height of the projection (10) in another region.

10          11. A Stirling refrigerator, provided with a regenerator that is disposed on a flow passage for a working gas flowing between a compression space (28) and an expansion space (29) and is formed by stacking a film-shaped resin member (8) in a direction crossing a flow direction of said working gas,

    said resin member (8) having a plurality of projections (10) on its surface,

15          said plurality of projections (10) providing a gap (9) between layers of said stacked resin member (8), and

    on the surface of said resin member (8), the number of said projections (10) per unit area being increased as the distance from said expansion space (29) decreases, compared to the side of said compression space (28).

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12. (cancelled)

13. (cancelled)

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14. (cancelled)

15. (cancelled)

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16. (cancelled)

17. (amended) A manufacturing apparatus of a regenerator, forming a projection (10) on a surface of a film-shaped resin member (8), comprising:

5 sending means (113) for sending said film-shaped resin member (8) in one direction;

projection formation means (101, 201) for subjecting the surface of said film-shaped resin member (8) to plastic deformation to form said projection (10); and

height adjustment means (114), having a pair of pinching members (114a, 114b) spaced apart from each other by a predetermined distance and arranged to face each other in a direction crossing the surface of said film-shaped resin member (8) on a downstream side of said projection formation means (101, 201), for adjusting a height of said projection (10) formed by said projection formation means (101, 201) by letting said film-shaped resin member (8) pass through a gap between said pinching members

15 (114a, 114b).

18. (cancelled)

19. (cancelled)